WHAT IS CLAIMED IS:

1. A control system for regulating a quantity to be controlled based on a deviation of the controlled quantity from a target value thereof and control parameters, said control system comprising:

a behavior feature value detector for detecting one of the period and the frequency of behaviors of a specific kind performed by a subject to be controlled;

a variation calculator for calculating the amount of variations in said one of the period and the frequency; and

a control parameter updator for updating the value of at least one of the control parameters based on the amount of said variations.

2. The control system according to claim 1, wherein the control parameter updator decreases the value of a proportional control coefficient which constitutes one of the control parameters according to the amplitude of the controlled quantity when the amount of said variations is smaller than a specific threshold value.

3. The control system according to claim 1 or 2, wherein the control parameter updator increases the value of a proportional control coefficient which constitutes one of the control parameters according to the magnitude of the

deviation when the amount of said variations is equal to or larger than a specific threshold value.

4. The control system according to claim 3, wherein the control parameter updator decreases the value of a differential control coefficient which constitutes one of the control parameters when the amount of said variations is equal to or larger than the specific threshold value.

5. The control system according to one of claims 1 to 4, wherein the variation calculator calculates the amount of said variations based on a standard deviation of one of the periods and the frequencies of a specific number of the latest behaviors.

6. The control system according to one of claims 1 to 5, said control system further comprising:

a behavior detector for successively determining a time range of each of the behaviors of the specific kind performed by the controlled subject based on the control parameters;

wherein the behavior feature value detector detects said one of the period and the frequency of the behaviors of the specific kind based on the time range.

7. The control system according to claim 6, wherein the behavior detector determines timings at which the controlled quantity takes extrema as being a start timing and an end timing of the time range of each of the behaviors.

8. The control system according to one of claims 1 to 7, wherein the controlled subject is a ship, the controlled quantity is the ship's heading, and said control system controls a steering device of the ship.

9. A control method for regulating a quantity to be controlled based on a deviation of the controlled quantity from a target value thereof and control parameters, said control method comprising:

a behavior feature value detecting step of detecting one of the period and the frequency of behaviors of a specific kind performed by a subject to be controlled;

a variation calculating step of calculating the amount of variations in said one of the period and the frequency; and

a control parameter updating step of updating the value of at least one of the control parameters based on the amount of said variations.

10. A control state judgment device used in a control

system for regulating a quantity to be controlled based on a deviation of the controlled quantity from a target value thereof and control parameters, said control state judgment device comprising:

a behavior feature value detector for detecting one of the period and the frequency of behaviors of a specific kind performed by a subject to be controlled;

a variation calculator for calculating the amount of variations in said one of the period and the frequency; and

a control state judgment section for determining a control state of the controlled subject based on the amount of said variations.

11. A control state judgment method used in a control system for regulating a quantity to be controlled based on a deviation of the controlled quantity from a target value thereof and control parameters, said control state judgment method comprising:

a behavior feature value detecting step of detecting one of the period and the frequency of behaviors of a specific kind performed by a subject to be controlled;

a variation calculating step of calculating the amount of variations in said one of the period and the frequency; and

a control state judgment step of determining a control

state of the controlled subject based on the amount of said variations.